

WHAT IS CLAIMED IS:

1. An inductance component comprising:

a magnetic core having at least one magnetic gap;

means for generating a direct-current biased magnetic field produced by mounting at least one of permanent magnets in the vicinity of a generally closed magnetic circuit which passes through the magnetic gap in the magnetic core; and

a coil wound around the magnetic core,

wherein said at least one of permanent magnets are mounted in the vicinity of the magnetic gap at least one of end portions of the magnetic core, said end portions defining the magnetic gap therebetween.

2. An inductance component according to claim 1, wherein a small piece of core formed of a soft magnetic material is mounted in the magnetic gap.

3. An inductance component according to claim 2, wherein each of the permanent magnets is mounted in the vicinity of the magnetic gap, adjacent to at least one of the magnetic portions of the magnetic core including the small piece of core and sandwiching the magnetic gap in corporate to one of the end portions opposite to the other end portion of the magnetic core.

4. An inductance component according to claim 2, wherein each of the permanent magnets is mounted in the vicinity of the end portion of the magnetic core facing the small piece of core.

5. An inductance component according to claim 1, wherein the magnetic core is formed in U-shape and has one magnetic gap and two magnetic legs facing each other while sandwiching the magnetic gap.

6. An inductance component according to claim 5, wherein said one of permanent magnets is provided at a surface selected from an end surface of one of said end portions and a side surface of the one of end portions.

7. An inductance component according to claim 1,
wherein the magnetic core is formed in E-shape and has two magnetic gaps and three end portions facing each other while sandwiching the magnetic gaps, and a coil is wound around a central magnetic leg of the magnetic core;
and

wherein the permanent magnets are mounted at both end portions of the magnetic core other than at an end portion of the central magnetic leg in such a manner that the orientation of magnetization thereof is symmetrical.

8. An inductance component according to claim 7, wherein said permanent magnets are provided at two surfaces, respectively, said two surfaces being selected from both end surfaces of said magnetic legs and both outside surfaces of said magnetic legs.

9. An inductance component according to claim 1, wherein one of the pair of opposed end portions forming the gap of the magnetic core has a protrusion protruding toward the other of the pair of opposed end portions.

10. An inductance component according to claim 9, wherein the permanent magnet is arranged further apart from the other opposed end portion than from the protrusion.

11. An inductance component according to claim 9, wherein the magnetic core is formed in U-shape; and

wherein one of said at least one of the permanent magnets is provided at the end surface of said one of pair of opposed end portions of the magnetic core.

12. A transformer substantially formed of the inductance component according to claim 1.

13. An inductance component comprising:
a magnetic core having at least one magnetic gap;

means for generating a direct-current biased magnetic field produced by mounting at least one of permanent magnets in the vicinity of a generally closed magnetic circuit which passes through the magnetic gap in the magnetic core; and

a coil wound around the magnetic core,

wherein said at least one of the permanent magnets are arranged on at least one of the outside portions of the magnetic core except in the magnetic gap in the magnetic core.

14. An inductance component according to claim 1, wherein said at least one of the permanent magnet are shaped like a plane or a general plane which is magnetized such that each entire surface thereof has magnetic polarity.

15. An inductance component according to claim 14,

wherein said at least one of the permanent magnet are arranged such that each pole face thereof is positioned near the outside of the magnetic core; and

wherein the coil is wound around the other magnetic leg of the magnetic core.

16. An inductance component according to claim 15, wherein, in at least one of the planar or generally planar shaped permanent magnets, each of the pole faces has almost the same or smaller area and shape as those of one of the magnetic legs of the magnetic core facing each other while sandwiching the magnetic gap; and

wherein the coil is wound around the other magnetic leg of the magnetic core.

17. An inductance component according to claim 14, wherein the magnetic core is formed in U-shape and has one magnetic gap and two magnetic legs facing each other while sandwiching the magnetic gap.

19. A transformer substantially formed of the inductance component according to claim 13.

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